

SYSTEMS FOR PREDICTING EARTHQUAKES
AND METHODS OF EMPLOYING SUCH SYSTEMS

ABSTRACT OF THE DISCLOSURE

A method of predicting earthquakes includes the step of positioning a first
5 transducer array adjacent to a seismically active region and below the water table, i.e., within the
zone of saturation. The first transducer array includes a first plurality of seismometers, at least
one first clock, and at least one first digitizer. The at least one first clock is in communication
with at least one of the first plurality of seismometers, and the at least one first digitizer also is in
communication with at least one of the first plurality of seismometers. The method also includes
10 the steps of detecting a plurality of wave movements resulting from dilation of the crust of the
Earth prior to an earthquake, and converting at least one of the wave movements into a first
voltage. The method further includes the step of discriminating between wave movements
resulting from dilation of the crust of the Earth and movements resulting from at least one other
event. The step of discriminating includes the step of filtering out wave movements having a
15 frequency below a first predetermined frequency, e.g., about 180 Hertz. The method also
includes the steps of determining a time at which the wave movements are detected by at least
one of the first plurality of seismometers, converting the first voltage into digital data, and
transmitting the digital data and the time from the at least one first digitizer to a communications
interface module. Moreover, the method includes the steps of transmitting the digital data and
20 the time from the communications interface module to a data processor, and determining a
likelihood of at least one future earthquake based on a number of the wave movements detected
over a predetermined period of time.